| Please type a plus sign (+) inside this box → + |
|---|
|---|

| | · | | |
|--|---------------------------------------|---|-------------------|
| | | Approved for use through 10/31/99 | . OMB 0651-003 |
| | OIP | Patent and Trademark Office: U.S. DEPARTMENT | OF COMMERC |
| Under the Panerwork Reduction Act of 1995. | no persons are required to respond to | Patent and Trademark Office: U.S. DEPARTMENT a collection of information unless it displays a valid Office. | AB control number |
| | | | |

| Sı | bstitute | for form | 1449A/7TO | | plete if Known |
|-------|------------------|----------|-------------------|------------------------|---------------------|
| | | | NOV 2 4 2003 | Application Number | 10/630,918 |
| INFO | RMA ⁻ | TION | DISCEOSURE | Filing Date | November 20, 2003 |
| STAT | EME | NT B | Y APPEKSANT | First Named Inventor | RUBINSTEIN, Abraham |
| | | | CEMP . | Group Art Unit | Not yet known |
| (us | e as ma | ny she | ets as necessary) | Examiner Name | WEBMAN, E. |
| Sheet | 1 | of | 5 | Attorney Docket Number | P-4798-US2 |

| | U.S. PATENT DOCUMENTS | | | | | | | | |
|-----------------------|--|-----------------------|------------------------------|---|------------------------------|--|--|--|--|
| | Cito | U.S. Patent Document | | Name of Patentee or Applicant of Cited Document | Date of Publication of | Pages, Columns, Lines, Where Relevant | | | |
| Examiner Initials* | Cite No.1 | Number Kind (if ki | d Code ² nown) | of Cited Document | Cited Document MM-DD-YYYY | Passages or Relevant Figures Appear | | | |
| 19 | AA | 4,568,559 | | NUWAYSER et al. | Feb. 4, 1986 | | | | |
| // | | | | | | | | | |
| | | | · | | | | | | |
| <i>/</i> | | | | | | | | | |
| | <u> </u> | · | | | | | | | |
| | ļ | | | | | | | | |
| | | | | | ***** | | | | |
| | <u> </u> | | | | | | | | |
| | <u> </u> | | | | | | | | |
| | | | · · · | | | | | | |
| | | | | | | | | | |
| | | | <u>-</u> | | | | | | |
| | | | | · | | | | | |
| | 1 | | | | | . , | | | |
| | | | | | | · | | | |
| | - | | | | | | | | |
| | | | | | | · · · · · · | | | |
| | | <u> </u> | | | | , | | | |
| | | | | | | - | | | |
| | 1 | I | | · | <u> </u> | | | | |

| | | | | FORE | IGN PATENT DOCUM | ENTS | | |
|-----------------------|--|--------------|---|------------------------------|--|--|--|----|
| Examiner Initials* | Cite No. | | gnPatent Docu Kind Number ⁴ (if ki | I Code ⁵ nown) | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | Te |
| 17 | AB | DD | 252539A1 | | Europe | Dec 1987 | | |
| 1/ | | | | | | | | |
| 0 | | | | | | | | |
| | | | | | | | | |
| | | 1 | | | | | | |
| | | | 1 | | | | | |
| | _ | | 1 | | | | | |
| | † | | | | | | | T |
| | | | 1 | | | | | |
| | 1 | | | | | | | |
| <u> </u> | <u> </u> | | | | | | | |
| Examine Signatur | | | \mathcal{C} | 1 | Dat | te nsidered / 6 | 109 | |

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the Indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

| Please type a plus sign (+) inside this box → ↓ ↓ Under the Paperwork Reduction Act of 1995, no pers | | reduline to | nesp | Patent and Trader | PTO/SB/08A pproved for use through 10/31/99. OMB 06 mark Office: U.S. DEPARTMENT OF COM mation unless it displays a valid OMB control | 51-0031 |
|--|-----|-------------|-------|-------------------|--|---------|
| Substitute for form 1449B/PT0 | NO. | N 2 4 20 | B | Con | nplete if Known | 7 |
| | E | ,, - | | lication Number | 10/630,918 | 7 |
| INFORMATION DISCLO | SOR | Ę., | ghili | ng Date | November 20, 2003 | 7 |
| STATEMENT BY APPLI | CAN | PADEM | Fire | st Named Inventor | RUBINSTEIN, Abraham | 7 |

Group Art Unit

Examiner Name

Attorney Docket Number

(use as many sheets as necessary)

5

of

2

Sheet

Not yet known

WEBMAN, E.

P-4798-US2

| | | NON PATENT LITERATURE DOCUMENTS | | | | |
|-----------------------|---|--|----|--|--|--|
| Examiner Initials* | Cite No.1 | Include name of the author (in CAPITAL LETTERS), title of the article (where appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T² | | | |
| 2 | AC | BATTAGLIA, E., et al., "Characterization of a New Class of Inhibitors of the Recombinant Human Liver UDP-Glucuronosyltransferase, UGT1*6, Biochimica et Biophysica Acta, 1243: 9-14 (1995) | | | | |
| | BENET, L.Z., et al., "Importance of Drug Metabolism and Antitransport Processes: A Paradigm Shift in Oral Drug Delivery," Proceedings of the 7th International Symposium on Recent Advances in Drug Delivery Systems, Salt Lake City, Utah, pp 11-14 (1995) | | | | | |
| | AE | BORCHARD, G., et al., "Multifunctional Polymers for Improved Peroral Peptide Drug Absorpton," Proceedings of the 7th International Symposium on Recent Advances in Drug Delivery Systems, Salt Lake City, Utah, pp 7-10, Bai J. P-F., et al. ibit., pp 153-154 (1995). | | | | |
| | AF | CHAO, Y.W. and FLYNN, M., "Oral Delivery of Insulin," Lancet, 23: 1518-1519 (1989). | | | | |
| | AG | DAMGÉ, C., et al., "New Approach for Oral Administration of Insulin with Polyalkylcyanoacrylate Nanocapsules as Drug Carrier," Diabetes, 37: 246-251 (1988). | | | | |
| | АН | DANFORTH, JR., E. and MOORE, R.O., "Intestinal Absorpton of Insulin in the Rat," Endocrinology, 65 : 118-123 (1959). | | | | |
| | Al | DAPERGOLAS, G. and GREGORIADIS, "Hypoglyaemic Effect of Liposome-Entrapped Insulin Administered Intragastrically into Rats," Lancet, 2:824-827 (1976). | | | | |
| | LA | Eudragit® RL Data Sheet (Info RL-3/e). No date given. | | | | |
| - | AK | Eudragit® RL/RS Standards Sheet (Info RL/RS-7/e). No date given. | | | | |
| | AL | Eudragit® RL/RS Technical Application Pamphlet (Info RL/RS-11/e). No date given. | | | | |
| 1 | АМ | Eudragit® RL/RS Technical Application Pamphlet (Info RL/RS-12/e). No date given. | | | | |
| 1 | AN | Eudragit® RL and RS Application in the Production of Pharmaceutical Preparations Prospectus (Info RL/RS-1/e). No date given | | | | |
| | | - | | | | |
| Examir Signatu | | Date Considered (0/04 | | | | |

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

^{*} EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

| Please type | a plus s | ign (+) ins | side this | box → | + |
|-------------|----------|-------------|-----------|-------|---|
|-------------|----------|-------------|-----------|-------|---|

of

5

Sheet

P-4798-US2

| e Paperwork Reduction Act of 1995, no persons are refaired | Detect and Trades | proved for use through 10/31/99. OMB mark Office: U.S. DEPARTMENT OF Comation unless it displays a valid OMB con | CARACO |
|--|----------------------|--|--------|
| Substitute for form 1449B/RTO NOV 2 4 2003 | Con | nplete if Known | |
| | Application Number | 10/630,918 | |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT | Filing Date | November 20, 2003 | |
| STATEMENT BY APPLICANT | First Named Inventor | RUBINSTEIN, Abraham | |
| | Group Art Unit | Not yet known | |
| (use as many sheets as necessary) | Examiner Name | WEBMAN, E. | |

Attorney Docket Number

| | | NON PATENT LITERATURE DOCUMENTS | |
|-----------------------|--------------|--|----|
| Examiner Initials* | Cite No.1 | Include name of the author (in CAPITAL LETTERS), title of the article (where appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T² |
| () | AO | FAHR, A., "Cyclosporin Clinical Pharmacokinetics," Clin. Pharmacokinet., 24(6): 472-495 (1993) | |
| Ti | AP | GEARY, R.S. and SCHLAMEUS, H.W., "Vancomycin and Insulin Used as Models for Oral Delivery of Peptides," J. Controlled Release, 23: 65-74 (1993) | |
| | AQ | GORIYA, Y., et al., "Blood Glucose Control and Insulin Clearance in Unrestrained Diabetic Dogs Portally Infused with a Portable Insulin Delivery System," Diabetologia, 19: 452-457 (1980) | |
| | AR | HOCHMAN, J.H., et al., "In vitro and In Vivo Analysis of the Mechanism of Absorption Enhancement by Palmitoylcamitine," J. Parm. and Exp. Therap., 269 (2): 813-822 (1994) | |
| | AS | HOCHMAN, J. and ARTURSSON, P., "Mechanisms of Absorption Enhancement and Tight Junction Regulation," J. Controlled Release, 29 : 256-267 (1994) | |
| | AT | HONESCH, H., et al., "Cytochrome P-450 and Drug Metabolism in Intestinal Villous and Crypt Cells of Rats: Effect of Dietary Iron," Biochem and Biophys. Res. Comm., 65(1): 399-406 (1975) | |
| | AU | KIDRON, M., et al., "The Absorption of Insulin From Various Regions of the Rat Intestine," Life Science, 31 (25): 2837-2841 (1982). | |
| | AV | KRAELING, M.E.K. and RITSCHEL, W.A., "Development of a Colonic Release Capsule Dosage Form and the Absorption of Insulin," Meth Find Exp. Clin. Pharmacol., 14(3): 199-209 (1992) | |
| | AW | LEE, V.H.L., et al., "Oral Route of Peptide and Protein Drug Delivery," V.H.L. Lee (Ed.): Peptide and Protein Drug Delivery, Marcel Dkker, 1991 New York, pp 691-738. | |
| | AX | MORISHITA, M., et al., "Novel Oral Microspheres of Insulin With Protease Inhibitor Protecting From Enzymatic Degradation," Intl. J. Pharmaceutics, 78 : 1-7 (1992). | |
| | AY | MURANISHI, S., "Absorption Enhancers," Critical Reviews in Therapeutic Drug Carrier Systems, 7(1): 1-34 (1990) | |
| 1 | AZ | OSBORNE, R., et al., "Morphine and Metabolite Behavior After Different Routes of Morphine Administration: Demonstration of the Importance of the Active Metabolite Morphine-6-Glucuronide," Clin. Pharmacol, Ther., 47(1): 12-19 (1990) | |
| V | | | |
| Examin Signatu | | Date Considered 10/04 | |

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

^{*} **EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

| Please type | a plu | s sign (| (+) | Inside this box → | + |
|-------------|-------|----------|-----|-------------------|---|
|-------------|-------|----------|-----|-------------------|---|

PTO/SB/08A (10-96)
Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are respond to a collection of information unless it displays a valid OMB control number.

| | Substitu | ute for fo | / pm 1449B/PTO NOV 2 4 2000 | Application Number 10/630,918 SCLOBURE Filling Date N vember 20, 2003 APPLICANT First Named Inventor RUBINSTEIN, Abraham Group Art Unit Not yet known | |
|-------|----------|------------|--------------------------------|--|---------------------|
| | | | | | 10/630,918 |
| INFO | ORMA | OIT | N DISCLÓBURE | Filing Date | N vember 20, 2003 |
| STA | TEM | ENT | BY APPLICANT | First Named Inventor | RUBINSTEIN, Abraham |
| | | | | Group Art Unit | Not yet known |
| (u | se as m | any sh | eets as necessary) | Examiner Name | WEBMAN, E. |
| Sheet | 4 | of | 5 | Attorney Docket Number | P-4798-US2 |

| | | NON PATENT LITERATURE DOCUMENTS | · · · · · · · · · · · · · · · · · · · |
|-----------------------|--------------|--|---------------------------------------|
| Examiner Initials* | Cite No.1 | Include name of the author (in CAPITAL LETTERS), title of the article (where appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ² |
| J | AA2 | PATEL, H.M. and RYMAN, B.E., "Oral Administration of Insulin by Encapsulation Within Liposomes," FEBS Letters, 26(1): 60-63 (1976) | |
| <i>V</i> | AB2 | PETERS, W.H.M., et al., "Glutathione S-Transferase, Cytochrome P450, and Uridine 5' — Diphosphate-Glucuronosyltransferase in Human Small Intestine and Liver," Gastroenterology, 96 : 783-789 (1989) | |
| | AC2 | SAFFRAN, M., et al., "A New Approach to the Oral Administration of Insulin and other Peptide Drugs," Science, 233 : 1081-1084 (1986) | |
| | AD2 | SANDERS, L.M., et al., "Prolonged Controlled-Release of Nafarelin, A Luteinizing Hormone-Releasing Hormone Analogue, From Biodegradable Polymeric Implants: Influence of Composition and Molecular Weight of Polymer," J. Pharm. Sci., 75(4): 356-360 (1986) | |
| | AE2 | SANDERS, L.M., et al., "Controlled Delivery of an LHRH Analogue From Bjodegradable Injectable Microspheres," J. Controlled Release, 2: 187-195 (1985). | |
| | AF2 | SCHULTE-HERMANN, R. and PARZEFALL, W., "Adaptive Responses of Ra Liver to the Gestagen and Anti-Androgen Cyproterone Acetate and other Inducers. I. Induction of Drug-Metabolizing Enzymes," Chem Biol. Interactions, 31: 279-286 (1980). | |
| | AG2 | TAKAHASHI, K., et al., "Decanoic Acid Induced Enhancement of Rectal Absorption of Hydrophilic Compounds in Rats," Pharmaceutical Res., 11(10): 1401-1404 (1994) | |
| | AH2 | TAKAHASHI, K., et al., "Pharmacokinetics Analysis of the Absorption Enhancing Action of Decanoic Acid and its Derivatives in Rats," Pharm. Res., 11(3): 388-392 (1994). | |
| | AI2 | TOUITOU, E. and RUBINSTEIN, A., "Targeted Enteral Delivery of Insulin to Rate," Intl. J. Pharm., 30 : 95-99 (1986) | |
| | AJ2 | VAN HOOGDALEM, E.J., et al., "Intestinal Drug Absorption Enhancement: an Overview," Pharmac, Ther., 44: 407-443 (1989) | |
| | AK2 | WAHLSTRÖM, A., et al., "Tricyclic Antidepressants Inhibit Opioid Receptor Binding in Human Brain and Hepatic Morphine Glucuronidation," Phar. & Toxic., 75 : 23-27 (1994). | |
| | | | |
| ∉xamine Signatu | | Date Considered (0/04 | |

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

^{*} EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

| Please type a plu | s sign (+) inslo | le this box → | + |
|-------------------|------------------|---------------|---|
| | | | |

PTO/SB/08A (10-96)
Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no person are required to respond to a collection of information unless it displays a valid OMB control number.

| | Substitute for form 1449BLPTO NOV 2 4 2003 | | | | Complete if Known | |
|-----------------------------------|--|----|----------|---------------|------------------------|---------------------|
| | • | | E | ć | Application Number | 10/630,918 |
| INFORMATION DISCLOSURE | | | IRE MARK | Filing Date | November 20, 2003 | |
| STA | STATEMENT BY APPLICANT | | | NT | First Named Inventor | RUBINSTEIN, Abraham |
| • | | | | | Group Art Unit | Not yet known |
| (use as many sheets as necessary) | | |) | Examiner Name | WEBMAN, E. | |
| Sheet | 5 | of | 5 | | Attorney Docket Number | P-4798-US2 |

| | | NON PATENT LITERATURE DOCUMENTS | | | | |
|----------------------|--------------------------|--|--|--|--|--|
| Examiner nitials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (where appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | | | | |
| 7 | AL2 | WEINGARTEN, C., et al., "Oral Ingestion of Insulin Liposomes: Effects on the Administration Route," Life Science, 28 : 2747-2752 (1981) | | | | |
| 7 | AM2 | ZIV, W., et al., "Absorption of Protein via the Intestinal Wall, Bochem. Pharmcol, 36(7): 1035-1039 (1987) | | | | |
| J | AN2 | Database WPI, Week 9530, Derwent Publications Ltd., London, GB; AN 95-228636 & JP, A, 07 138 182 (TOYOBO et al.), 30 May 1995 Abstract. | | | | |
| | | | | | | |
| | · | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Examin | er T | Date | | | | |
| Signatu | | Considered 10/04 | | | | |

^{*} EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.